

RESPIROMETER

DETERMINATION OF AEROBIC OR ANAEROBIC BIODEGRADABILITY OF SOLID AND LIQUID SAMPLES

- 🌿 Plastic materials (ISO 14855-1, ASTM D 5338)
- 🌿 Organic waste (solid or liquid samples)
- 🌿 Food production
- 🌿 Compost
- 🌿 Wastewater



Modular Respirirometry Systems

ADVANTAGES

Per each reactor chamber there are:

- 🌿 Mass flow controllers for precise setting and measurement of gas flow in each reactor
- 🌿 Graphical presentation of test parameters, productions
- 🌿 Automatic humidification

SENSOR TECHNOLOGY

- 🌿 Optical NIR:CO₂ and CH₄
- 🌿 Electrochemical or paramagnetic O₂ sensor
- 🌿 Other sensors: H₂, H₂S, NH₃



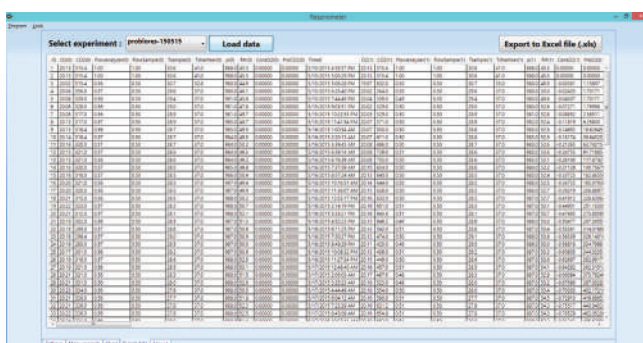
Respirometry solid state samples

FEATURES

- 🌿 6-12 measurement channels
- 🌿 Temperature from 5 to 70°C
- 🌿 Automatic leak detection
- 🌿 Aerobic or anaerobic bio- process measurement

MEASURING/MONITORING BIODEGRADABILITY OF DIFFERENT TYPES OF MATERIALS:

- soil, compost, plastic, and organic biodegradable materials
- yeast activity in beverage industry
- monitoring the activity of lactic acid bacteria's in milk fermentation
- respirometric measurements of activated sludge for efficient biological wastewater treatment
- different applications in biotechnology, biology, and ecology
- user friendly experiment set up and control



Text data files for easy graphic analysis.

EASY MS EXCELL EXPORT.

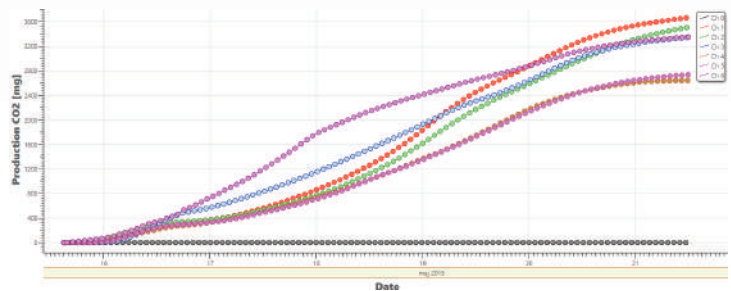
CHARACTERISTICS

TEHNICAL DATA

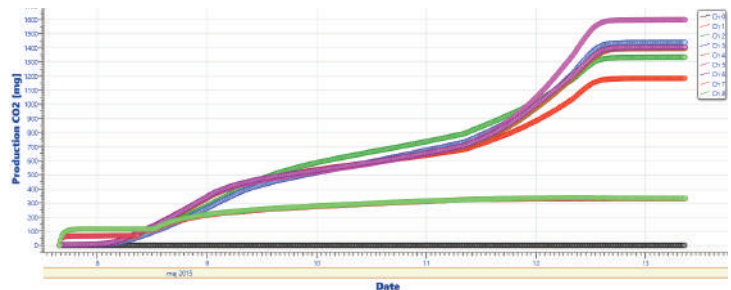
Measuring Parameters	Sensors: carbon dioxide, oxygen and methane, temperature, pressure, humidity, flow rate
Test material	Granules, powder, liquid, solid material or wastewater
Number of channels	6 or 12, more on request
Temperature	5 - 70°C
MFC on each channel	+/- 1.5% FS, 100-1000ml/min

RESPIROMETER APPLICATIONS

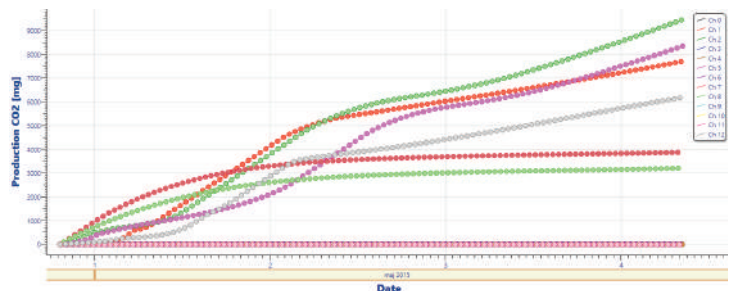
Study of respirometry of milk samples with addition of different types of probiotics: Linex, Linbi, Waya, Yogermin and yeast. Study of influence of different food additives on milk fermentation.



Testing biodegradation of different types of plastic materials in compost with addition of different active substances.



Yeast fermentation with different concentrations of substrate and different additives like sugar, kefir and milk.



RESPIROMETRY SOFTWARE – ERS12

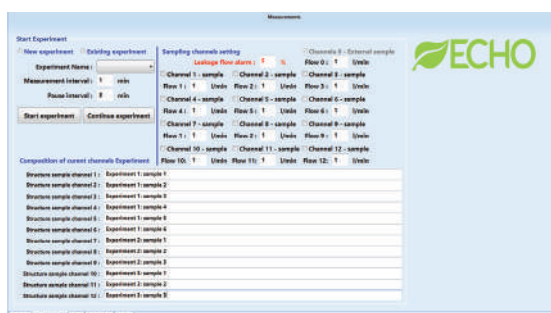
MEASURING SCREEN

- Continuous biodegradation progress monitoring in each reactor
- Checking the pre-set flow rates for each channel
- Monitoring of CO₂ and O₂ concentration in each reactor
- Measurement of humidity, pressure, and temperature of sample
- Graphical User Interface GUI



SETTING SCREEN

- Setting the flow rate per each channel
- Measurement time and pause interval setting between each channel
- Control and alarm setting for leakage alarm



Remote control for experiments monitoring and set up

